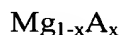


Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

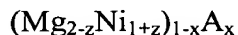
Listing of Claims:

1. (currently amended) A process for preparing a nanocomposite based on magnesium and at least one or several other elements or compounds known to absorb hydrogen and to be very few miscible with magnesium or its hydride during grinding, characterized in that it comprises:
 - a) subjecting magnesium or a magnesium-based compound known to absorb hydrogen, to a hydrogenation in order to obtain ~~the corresponding~~ a hydride in the form of a powder;
 - b) mixing the so-obtained hydride in a powder form with the other element(s) or compound(s) or with a hydride of said other element(s) or compound(s) to obtain a mixture;
 - c) subjecting the so-obtained mixture to an intensive mechanical grinding in order to obtain ~~the corresponding~~ a nanocomposite in the form of a hydride; and, if required,
 - d) subjecting the nanocomposite obtained in step c) to a hydrogen desorption, with the proviso that said other element(s) or compound(s) or their hydride(s) is not Mg_2NiH_4 .
2. (currently amended) The process according to claim 1, characterized in that, ~~in step a), use is made of~~ is carried out with magnesium.
3. (currently amended) The process according to claim 1, characterized in that, ~~in step a), use is made of~~ is carried out with a magnesium-based compound of the formula:



wherein A is at least one element selected from the group consisting of Li, Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Al, Y, Zr, Nb, Mo, In, Sn, O, Si, B, C, F and Be, and x is a number equal to or lower than 0.3.

4. (currently amended) The process according to claim 1, characterized in that ~~in step a), use is made of~~ is carried out with a magnesium-based compound of the formula:



wherein A is at least one element selected from the group consisting of Li, Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Al, Y, Zr, Nb, Mo, In, Sn, O, Si, B, C, F and Be, and x is a number equal to or lower than 0.3 and z is a number comprised between -0.3 to + 0.3 ~~and z is a number comprised between -0.3 to + 0.3.~~

5. (currently amended) The process according to claim 1, characterized in that ~~in step b), use is made of~~ is carried out with another element and said other element is selected from the group consisting of V, Ti, Fe, Co, Nb, Ca, Cs, Mn, Ni, Ca, Ce, Y, La, Pd, Hf, K, Rb, Rh, Ru, Zr, Be, Cr, Ge, Si, Li and their hydrides.

6. (original) The process according to claim 5, characterized in that the other element is V.

7. (original) The process according to claim 5, characterized in that the other element is Nb.

8. (currently amended) The process according to claim 1, characterized in that ~~in step b), use is made of~~ is carried out with another compound and said ~~at least one~~ other compound is selected from the group consisting of LaNi_5 , MnNi_5 , ZrMn_2 , ZrV_2 , TiMn_2 , Mg_2Ni and their hydrides except Mg_2NiH_4 , the solid solutions of the formula $\text{V}_{1-y}\text{Ti}_y$ ~~$\text{V}_{1-y}\text{Ti}_y$~~ where y ranges from 0 to 1, $(\text{V}_{0.9}\text{Ti}_{0.1})_{0.95}\text{Fe}_{0.05}$ and the atmosphere alloys of Mg-Ti.

9. (currently amended) The process according to claim 6, characterized in that ~~in step b), use is made of the other element or compound in such an amount that~~ the atomic or

molar percentage of said other element ~~or compound~~ in the mixture ~~be~~ is equal to or lower than 10%.

10. (currently amended) The process according to claim 9, characterized in that, in step b), ~~use is made of the other element or compound in such an amount that~~ the atomic percentage of said other element ~~or compound~~ in the mixture is equal to 5%.

11. (currently amended) The process according to claim ~~10~~, 9 characterized in that, in step b), ~~use is made of the other element or compound in such an amount of the~~ atomic percentage of said other element ~~or other compound~~ in a mixture ~~be~~ is equal to 3%.

12. (previously presented) The process according to claim 1, characterized in that in step c), the mixture is subjected to an intensive mechanical grinding in a ball milling machine for a period of 5 to 20 hours.

13. (previously presented) A nanocomposite based on magnesium and one or more other elements or compounds known to absorb hydrogen, characterized in that it is obtained by the process according to claim 1 and it has a very fine microstructure with activated interfaces.

14. (cancelled).

15. (new) The process according to claim 7, characterized in that in step b), the atomic or molar percentage of said other element in the mixture is equal to or lower than 10%.

16. (new) The process according to claim 15, characterized in that, in step b), the atomic percentage of said other element in the mixture is equal to 5%.

17. (new) The process according to claim 16, characterized in that, in step b), the atomic percentage of said other element in a mixture is equal to 3%.